DOCUMENT RESUME

ED 247 509 CG 017 671

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TITLE Further Clinical Validation of the Binge-Eating Scale.
PUB DATE Apr 84
NOTE 9p.; Paper presented at the Annual Convention of the Rocky Mountain Psychological Association (Las Vegas, NV, April 25-28, 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Anorexia Nervosa; Cognitive Style; Emotional Disturbances; Females; Measurement Techniques; Psychological Patterns; *Test Validity
IDENTIFIERS Binge Eating; *Binge Eating Scale; *Bulimia; Cognitive Factors Scale

ABSTRACT

Previous research has shown significant correlations between the Binge Eating Scale (BES) and the Cognitive Factors Scale (CFS) using obese subjects who were not selected based on criteria for eating disorders. To determine if similar relationships between binging severity and cognitive factors would hold for subjects who did meet the criteria for bulimia, anorexia, or both, and to determine if the BES would discriminate between those who report binging and those who do not, 48 female subjects were interviewed and given a battery of psychological tests including the BES and CFS. Analysis of results showed that anorexic subjects scored significantly lower on the BES than bulimics or bulimic/anorexic subjects. Significant correlations were found between binge eating and cognitions of personal dieting standards and dieting self-efficacy. Subjects' greater tendency to binge was related to more stringent standards and to a lower sense of personal efficacy in sticking to a diet. The findings add to the concurrent validity of the BES since subjects who had high rates of binging as part of the criteria for their diagnosis (bulimia and bulimia/anorexia) scored higher than anorexics, who binge to a lesser degree, and therefore do not have binging as part of their diagnostic criteria. (JAC)

Further Clinical Validation of the Binge-Eating Scale

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There has recently been a large increase in the reported incidence of bulimia and anorexia, although the reasons for this increase are not clear. Gormally, Black, Daston and Rardin (1982) have developed a measure of binge-eating severity, the 16-item Binge Eating Scale (BES) which assesses both the behavioral (e.g., eating quickly) and cognitive events associated with a binge (e.g., thinking of oneself as a failure). Gormally et al (1982) also developed the 11-item Cognitive Factors Scale (CFS) in order to assess two cognitive phenomena thought to be related to binge eating: (a) the tendency to impose unrealistically high standards for controlling eating behavior, and (b) expectations of low self-efficacy (Bandura, 1977) in maintaining a diet.

Gormally et al's (1982) results showed significant correlations between the BES and CFS; the more severe the binger the more likely he or she was to try an unrealistically strict diet and to experience low self-efficacy expectations in adhering to the diet. Gormally et al's subjects were self-referred for the treatment of obesity but were not selected on the basis of meeing DSM III criteria for eating disorders. The purpose of the present study was (1) to determine if similar relationships between binging severity and cognitive factors would also hold for subjects who did meet the DSM III criteria for bulimia, anorexia and a mixture of bulimia and anorexia, and (2) to determine if the BES would discriminate between subjects who report binges and those who do not, i.e., anorexics vs bulimics.

Method

Subjects

All subjects were obtained from a group of females (responding either to a campus newspaper advertisement for subjects for research on eating disorders or to knowledge of a University-based Eating Disorders Clinic) requesting evaluation and/or treatment for an eating disorder. Of 56 volunteers, 48 subjects met the requirements for anorexia (AN), bulimia (BUL) or both (BULAN) according to DSM-III criteria. Of these, 29 subjects were classified as BUL (mean age of 22.7 years), 7 as AN (mean age of 22.3 years) and 12 as BULAN (mean age of 26.4 years). The BULAN group consisted of subjects with a present status of bulimia and a past history of anorexia. Compared to the expected weights from the Metropolitan Life Tables 1983, subjects in the BUL and BULAN group were 90% of "normal" weight. AN subjects were 70% of normal weight. Only 5 subjects in the BUL group could be classified as overweight, with an average amount overweight of 9%.

Procedure

All subjects were asked to complete a screening questionnaire and interview to confirm the presence of an eating disorder and to rule out any other primary Axis I (DSM-III) disorder. Those meeting the criteria for an eating disorder were asked to complete a battery of psychological testing on the same day as the interview. This battery included five tests but only the results for the BES and CFS are reported here. Results with the entire battery are reported elsewhere (Ross, Todt, and Rindflesh, 1983). A correlation matrix was constructed for both tests administered among all three subject groups, AN, BUL, and BULAN. In addition, comparisons were made between group means for both tests for each of the three subject groups.

Results and Discussion

Means and standard deviations are presented in Table 1. As expected, AN subjects scored significantly lower on the BES ($\bar{x}$ = 20.43) than either BUL ($\bar{x}$ = 34.21) or BULAN ($\bar{x}$ = 35.42) subjects ($F = 20.69$, $df = 2,45$, $P < .001$). Similarly, AN subjects scored significantly lower ($\bar{x}$ = 9.43) on the efficacy subscale of the CFS than either BUL ($\bar{x}$ = 21.79) or BULAN ($\bar{x}$ = 20.58) subjects which reflects higher dieting self-efficacy expectations on the part of AN subjects. There were no differences between groups ior mean total CFS scores or the mean standards subscale scores. That is, all three groups had high dieting standards as reflected in mean scores of 48.00, 56.62, and 57.25 for the AN, BUL and BULAN groups respectively.

Table 2 presents the correlations between the BES and the CFS including the standards and efficacy CFS subscale scores. The product-moment coefficients ranged from .06 to .42. Thus, significant correlations were found between binge-eating and cognitions of personal dieting standards and dieting self-efficacy. The greater the tendency to binge, the more stringent one's standards and the lower one's sense of personal efficacy in sticking to a diet. The only exception to this principle was for the relationship between efficacy and binging for the BUL group ($r = .06$). The correlation between these two variables also did not attain significance for AN subjects since there were too few subjects in that group ($r = .24$, $N = 7$).

These results systematically replicate those obtained by Gormally et al (1982) using obese subjects. In the Gormally et al study, overall means of 20.8 (S.D. = 8.4) and 21.4 (S.D. = 9.2) were obtained for two samples of obese college students on the BES. These scores are nearly identical to the AN group in the present study ($\bar{x}$ = 20.43, S.D. = 6.45)

and significantly lower than the scores obtained for our BUL and BULAN groups. Similarly, Gormally et al (1982) obtained scores of 51.8 (S.D. = 12.9) and 51.6 (S.D. = 12.2) for the two samples using the CFS. These results compare to means of 48 (S.D. = 13.01), 56.43 (S.D. = 9.79), and 57.25 (S.D. = 11.07) for the AN, BUL and BULAN groups respectively in the present study. It would appear that high standards are a common element for a variety of eating disorders. It would be important to obtain normative data using the BES and CFS with subjects who are of normal weight and who do not suffer from an eating disorder in order to determine anchor points for the BES and CFS scales when comparing eating disorder subjects with normal subjects.

Gormally et al (1982) also obtained correlations of .56 and .53 for their two samples between the BES and CFS (total) scales. This compares with correlations of .37, .42, and .40 which were obtained with AN, BUL, and BULAN groups respectively. An overall correlation of .49 was obtained if all three groups are combined. Though lower, these correlations are fairly comparable. The fact that the lowest correlation between the two scales was obtained with the AN group may be an artifact of the smaller sample size. Present work is currently underway to enlarge the AN group.

These results add to the concurrent validity of the BES since subjects who have high rates of binging as part of the criteria for their diagnosis, i.e., BUL and BULAN groups, scored significantly higher than subjects who binge to such a lesser degree that binging is not part of their diagnostic criteria, i.e., the AN group.

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TABLE 1

MEANS AND STANDARD DEVIATIONS

Group	Standards	COGNITIVE FACTORS SCALE (CFS) Efficacy	TOTAL	BINGE EATING SCALE (BES)
ANOREXICS				
(AN, N = 7)				
MEAN	38.43	9.43	48.00	20.43
S. D.	11.06	4.04	13.01	6.45
BULIMICS				
(BUL, N = 29)				
MEAN	34.96	21.79	56.43	34.21
S. D.	8.66	6.44	9.79	7.73
MIXED				
(BULAN, N = 12)				
MEAN	36.67	20.58	57.25	35.42
S. D.	6.79	5.55	11.07	7.49

TABLE 2

Correlations Between Measures By Group

Binge-Eating Scale		Cognitive Total	Factors Standards	Scale Efficacy
Anorexics	(N = 7)	.37	.33	.24
Bulimics	(N = 29)	.42*	.42*	.06
Bul / Anor	(N = 12)	.40	.35	.36
Combined	(N = 48)	.49**		

* $p < .05$

** $p < .01$